

Amendment to the Drawings

A replacement sheet for Figure 2 is attached after the last page of this amendment. The amendment to Figure 2 adds reference number 2 to indicate a cleaning strip assembly, as requested by the Examiner. No new matter is introduced.

Remarks

Claims 53 – 55 and 77 are canceled, in accordance with the previous restriction requirement.

Claims 38 and 39 are amended to clarify the claim language.

A translation of Japanese patent document 59-166126 is provided with this response.

Objections to the Drawings

In the Office Action, FIG. 2 is objected to because element 19 is not described. Paragraph 0040 is amended to provide a corresponding description of element 19. Support for the amendment to paragraph 0040 can be found, for example, in FIG. 2 and paragraphs 0037 and 0050 (description of brush rotation causing debris to be propelled up over wall and into an intermediate compartment). No new matter is added.

The Examiner has also requested that a number be added to represent the cleaning strip assembly in FIG. 2. A Replacement sheet for FIG. 2 with the reference numeral 2 for the cleaning strip assembly is attached at the end of this amendment. Note that a description of cleaning strip assembly 2 is already provided in conjunction with FIGS. 3 and 4. No new matter is added.

Objections to the Claims

Claims 38 and 39 are amended to correspond to the language used in claim 37. Withdrawal of the objection is requested.

Rejections under 35 U.S.C. §103

The rejection of claims 35 and 83 under 35 U.S.C. §103(a) as being unpatentable over Japanese patent document 59-166126 (The '126 reference) is respectfully traversed. Claims 35

and 83 require an electric motor. Claims 35 and 83 also require a belt connecting the motor and a rotatable brush. The '126 reference does not describe or suggest either of these required elements.

The '126 reference describes a carpet sweeper. The carpet sweeper in the '126 reference is not powered by an electric motor. Instead, the brush bar 4 in the sweeper is driven by a drive wheel 2. (See last paragraph on page 4 of translation.) The Examiner identified element 21 in the drawings of the '126 reference as an electric motor. However, element 21 is actually a selector lever for raising and lowering the level of the sweeper. (See pg 6, line 9 to pg 7, line 5 of accompanying translation.) More generally, the '126 reference does not provide any description or suggestion that a motor could be incorporated into the describe carpet sweeper. The '126 reference also fails to provide any teaching of a belt for driving a brush. The brush 4 shown in the '126 reference is driven instead by direct contact with the drive wheel 2. Because the '126 reference fails to describe or suggest either an electric motor or a belt for driving a brush by an electric motor, reconsideration and withdrawal of the rejection to claims 35 and 83 is respectfully requested. Withdrawal of the rejection for corresponding dependent claims 36 – 50 and 84 – 93 is also requested.

The rejection of claims 51 and 75 under 35 U.S.C. §103(a) as being unpatentable over Japanese patent document 59-166126 (The '126 reference) is respectfully traversed. Claims 51 and 75 require a substantially continuous surface cleaning strip extending across an underside of the housing, wherein movement of the apparatus in a first and/or cleaning direction causes the cleaning strip to adopt a first and/or cleaning orientation relative to the housing such that in use a substantially continuous edge of the cleaning strip contacts the surface to be cleaned. The '126 reference does not describe or suggest this required element.

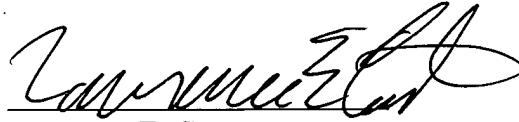
The '126 reference describes a semicylindrical-shaped swingable brush unit 11 that is pivotally attached to a second dust chamber 7b. (See page 8 of translation, last paragraph) The Examiner identified element 12 as corresponding to the substantially continuous surface cleaning strip. Element 12, however, does not remain in contact a surface to be cleaned during motion of the sweeper in a first direction. As described in the translation, movement of the sweeper causes element 12 to collide either with edge 10a or edge 10b of the bottom of the sweeper. (Pg 8, line 20 – pg 9, line 13.) No suggestion or description is provided that element 12 can or should remain in contact with the surface being swept while the sweeper is in motion. Note also that element 14 is described as inclined piles. The drawing confirms that 14 is a brush-like structure, and not a substantially continuous strip. Thus, the '126 reference fails to describe or suggest all of the elements of claims 51 and 75. Reconsideration and withdrawal of the rejection to claims 51 and 75, and corresponding dependent claims 52, 56 – 74, 76, and 78 – 82 is respectfully requested.

Based on the above amendments, it is believed that all currently pending claims are allowable. Accordingly, applicants request early and favorable reconsideration in the form of a Notice of Allowance.

The Commissioner is hereby authorized to charge any fee which may be due, or credit any overpayment, to Deposit Account No. 19-2112.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

Respectfully yours,

A handwritten signature in black ink, appearing to read 'Lawrence E. Carter', written over a horizontal line.

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Applicant: Nippon Seal Co., Ltd.

SPECIFICATION

1. TITLE OF THE INVENTION

CARPET SWEEPER

2. CLAIMS

(1) A carpet sweeper including a roller brush adapted to be rotated according to a drive wheel pivotally attached to a sidewall of a sweeper body and a rear wheel attached to a rear end of the sweeper body, characterized by comprising:

a dust chamber designed to be detachable from the sweeper body and divided into a first dust chamber and a second dust chamber by a partition wall;

a semicylindrical-shaped swingable brush unit pivotally attached to a sidewall of said second dust chamber in such a manner as to be exposed outside from an opening formed in a bottom wall of said second dust chamber;

an appropriate number of contact members arranged in a laterally central region of an outer peripheral surface of said swingable brush unit in a protruding manner;

a group of first inclined piles formed in one or both of two regions of said outer peripheral surface divided by said contact members, and inclined toward the inside of said second dust chamber; and

a fixed brush attached to an inner wall of said second dust chamber on one or both

sides of said opening and formed with a group of second inclined piles inclined in a same direction as the inclination of said first inclined piles, in such a manner as to allow said second inclined piles to come into contact with said first inclined piles in a sliding manner.

(2) The carpet sweeper as defined in claim 1, wherein said dust chamber is provided with a top lid which is pivotally attached to the sidewall of the sweeper body and designed to allow said dust chamber to be detachably housed in said sweeper body by use of a top-lid lock member pivotally attached to said sweeper body.

(3) The carpet sweeper as defined in claim 1, wherein said dust chamber is designed to be detachably housed in said sweeper body through an openable/closable top lid pivotally attached to the sidewall of the sweeper body.

(4) The carpet sweeper as defined in either one of claims 1 to 3, which includes height adjustment means operable to adjust a vertical position of said rear wheel attached to the rear end of the sweeper body.

3. DETAILED DESCRIPTION OF THE INVENTION

This invention relates to an improvement of the invention concerning a sweeping device (carpet cleaner) which comprises a roller brush filled with relatively long bristles and a swingable brush unit having a group of inclined piles, which is disclosed in Japanese Parent Application No. 55-52072.

In the carpet sweeper previously proposed by the applicant, the roller brush is used in an operation for sweeping a flat/smooth floor. In an operation for sweeping a non-flat/smooth surface of a pile-woven fabric, such as carpet or rug, the swingable brush unit having the group of first inclined piles is moved downward and used in combination with the roller brush. Dusts

removed by the roller brush and the swingable brush unit are collected into a dust chamber pivotally attached to a sidewall of a sweeper body, without being separated from each other. During this operation, relatively large dusts on the flat/smooth floor are thrown up by the roller brush, and fibrous dusts, such as lint or pet's hairs, on the non-flat/smooth pile-woven fabric surface, can also be reliably swept by a cooperative dust-removal action of the first inclined piles of the swingable brush unit and a group of second inclined piles of a fixed brush. In this way, this carpet sweeper achieved a significantly enhanced sweeping effect.

However, the above carpet sweeper has the following disadvantages. Firstly, the dust chamber is pivotally attached to the sidewall of the sweeper body and cannot be detached from the sweeper body. Thus, when the collected dusts are thrown away, a user has to carry the sweeper body to a trash area. Moreover, in the trash area, the user has to rotate the dust chamber about a pivot shaft against a biasing force of a reverse-V-shaped elastic pressing member to expose an opening of the dust chamber from a bottom of the sweeper body and throw away the dusts through the opening. Secondly, relatively large dusts thrown up by the roller brush and fibrous dusts, such as lint or pet's hairs, scraped out by the cooperative action of the swingable brush unit and the fixed brush designed to come in contact with the swingable brush unit in a sliding manner, are collected into the common dust chamber all together. In connection with this structure, it was found that the relatively large dust thrown up by the roller brush is likely to fall into a gap between an inner wall surface of the sweeper body and an outer peripheral surface of the swingable brush unit and hinder a smooth swing movement of the swingable brush unit, and consequently an intended sweeping effect cannot be sufficiently achieved.

In order to overcome and improve the above disadvantages, it is an object of the present invention to provide a carpet sweeper, wherein a dust chamber is designed to be a cassette-type detachable relative to a sweeper body so as to allow a user to carry only the dust chamber detached from the sweeper body to throw away dusts therein, and the dust chamber is divided

into first and second dust chambers by a partition wall so as to allow relatively large dusts and fibrous dusts removed by a roller brush and a swingable brush unit to be collected separately into the first and second dust chambers to prevent the relatively large dusts from falling into a gap between an inner wall surface of the sweeper body and an outer peripheral surface of the swingable brush unit and thereby ensure a smooth movement of the swingable brush unit.

A framework of this invention will be described based on FIG. 1.

In a carpet sweeper including a roller brush 4 adapted to be rotated by a drive wheel 2 pivotally attached to a sidewall 1a of a sweeper body, a swingable brush unit 11 having a group of first inclined piles 14, and a fixed brush 16 adapted to come into contact with the first inclined piles in a sliding manner, a cassette-type dust chamber 7 detachable from the sweeper body 1 is put in the sweeper body 1 from an upper opening 1c of the sweeper body 1, as shown in FIG. 1, and then held by a top lid 6 pivotally attached to a sidewall 7c of the dust chamber or the side wall 1a of the sweeper body holds, in a non-disengageable manner relative to the sweeper body. The dust chamber 7 is divided into a first dust chamber 7a and a second dust chamber 7b by a partition wall 8 extending in a width or lateral direction of the sweeper body 1. This carpet sweeper is designed such that relatively large dusts thrown up by the roller brush 4 and fibrous dusts scraped out by a cooperative action of the first inclined piles 14 of the swingable brush unit 11 and a group of second inclined piles 17 of the fixed brush are collected separately into the first dust chamber 7a and the second dust chamber 7b.

With reference to the drawings, one embodiment of the present invention will be described below.

A roller brush 4 densely filled with relatively long bristles and designed to be rotated by a driven wheel 4a in contact with a drive wheel 2 pivotally attached to a sidewall 1a of a sweeper body, and a dust chamber 7 detachably housed in the sweeper body 1 while being supported by an inwardly-bended portion 1e (?) of a lower end of the sweeper body 1 is disposed between a pair of drive wheels 2 pivotally attached to an front end of the sweeper body 1 and a rear wheel 3

attached to a rear end of the sweeper body 2, and an upper end of the dust chamber 7 is covered by an openable/closable top lid 6 integrated with or separated from the dust chamber 7. An inner space of the dust chamber 7 is divided into a first dust chamber 7a on the side of the roller brush 4 and a second dust chamber 7b on the side of the rear wheel 3 by a partition wall 8 extending laterally. A swingable brush unit 11 pivotally attached to a sidewall 7c of the dust chamber and formed to have an arc-shaped outer peripheral surface 11a is arranged in such a manner as to be exposed outside from a laterally-elongated oblong-shaped opening 10 formed in a bottom wall 9 of the second dust chamber 7b. A desired number of contact members 12 are attached to an intermediate region of the outer peripheral surface 11a of the swingable brush member 11 at appropriate intervals in the lateral direction in such a manner as to protrude outward therefrom. In order to prevent a surface of a target, such as floor or tatami mat, from being damaged when the swingable brush unit 11 is swung about a spindle 13, an elastic material, such as rubber, having flexibility and appropriate wear resistance against the target surface is suitably used as a material of the contact members 12.

The outer peripheral surface 11a of the swingable brush unit 11 is longitudinally divided into two regions by the contact members 12, and a detachable pile-holding member 12 provided with a group of first inclined piles 14 inclined toward the inside of the second dust chamber 7b is fitted into one of the regions on the side of the drive wheel 2. Further, a fixed brush 16 provided with a group of second inclined piles 17 inclined in the same direction as the inclination of the first inclined piles 14 is fixedly attached to an inner wall defining the opening of the second dust chamber 7b in such a manner as to allow the second inclined piles 17 to come into contact with the first inclined piles 14 in a sliding manner. While the first and second inclined piles 14, 17 in FIGS. 1 and 4 are provided on only one of opposite sides of the contact members 12, they may be provided on both sides of the contact members 12, as shown in FIG. 5.

Typically, a single piece of the rear wheel 9 is attached to a laterally central region of the rear end of the sweeper body 1. The rear wheel 9 is provided as a means to allow the first

inclined piles 14 of the swingable brush unit 11 to selectively come into contact with and get away from a non-flat/smooth surface of pile-woven fabric according to height adjustment means 26 designed to be moved vertically slidably within a housing 18 formed in the sweeper body 1. The height adjustment means 26 comprises a gate-shaped slidable member 20 fitted in the housing 18. The gate-shaped slidable member 20 has an inner surface formed with a shaft hole 20a pivotally supporting a spindle 3a of the rear wheel 3. The height adjustment means 26 also includes two springs 19, 19 disposed between the slidable member 20 and an inner surface of a bottom wall of the housing 18 to apply a biasing force to the slidable member 20 upward. Further, the height adjustment means 26a includes a selector lever 21 supported by a semi-arc-shaped cutout 18a of the housing 18 through a shaft 22. The selector lever 21 has a pressing portion 21b designed to come into contact with a top surface of the slidable member 20 so as to prevent an upward movement of the slidable member 20. A portion of the top surface of the slidable member 20 to be brought in contact with a distal end of the pressing portion 21b is formed as an engagement groove 20b for holding the pressing portion 21b of the selector lever 21 in a normal usage mode. The selector lever 21 also has a manual operation portion 21a protruding outside from the sweeper body 1 through an opening 23a of a cover plate 23, and a selectable angle of the selector lever 21 is restricted by opposite tapered surfaces 23b, 23b of the opening 23a. The cover plate 23 is attached to the housing 18 by elastically fitting an engagement pawl 23c of the cover plate 23 into a cutout 18b formed in an upper sidewall of the housing 18.

Thus, when the selector lever 21 is rotated counterclockwise as shown in FIG. 3(a), the pressing portion 21b of the selector lever 21 comes into contact with the top surface of the slidable member 20 in an approximately horizontal posture, so that the slidable member 20 is moved upward by the biasing force of the springs 19 and then the upward movement is blocked by a side surface of the slidable member 20. This allows the swingable brush unit 11 to come into contact with a surface A of a target, such as carpet or rug, as indicated by the solid line in

FIG. 1, in addition to the roller brush 4. When the selector lever 21 is rotated clockwise as shown in FIG. 3(b), the pressing portion 21d is rotated to stand upright so as to push the slidable member 20 downward up to a lowermost position. This allows only the swingable brush unit 11 to be floated from a surface B of a target, such as floor, as indicated by the two-dot chain line in FIG. 1.

The top lid 6 covering the upper portion of the dust chamber 7 is pivotally attached to a region of the dust-chamber sidewall 7c on the side of the rear wheel 3 through a shaft 24. As shown in FIGS. 1 and 4, the top lid 6 has an inner surface formed with two line-shaped protrusions 6b, 6b adapted to come into contact with respective upper ends of a rear wall 7d of the dust chamber 7 and the partition wall 8 so as to prevent the first dust chamber 7a and the second dust chamber 7b from being fluidically connected to one another. The dust chamber 7 has a front wall 7e defining an opening 25 leading toward the roller brush 4, in cooperation with an front engagement portion 6c of the top lid 6 engageable with an inner edge 1d of the upper opening 1c of the sweeper body 1. Relatively large dusts thrown up by the roller brush 4 are transferred along a curved dust guide plate 28 attached to the inner surface of the sweeper body 1 above the roller brush 4, and collected into the first dust chamber 7a through the opening 25.

As shown in FIGS. 1 and 2, the reference numeral 27 indicates a top-lid lock member pivotally attached to a region of a top surface of the sweeper body 1 on the side of the selector lever 21. The cassette-type dust chamber 7 put in the sweeper body 1 can be locked in a non-disengageable manner by engaging the front engagement portion 6c of the top lid 6 with the upper opening 1c of the sweeper body 1, and then locking an elastic protrusion 6d formed in the other end of the top lid 6, using the top-lid lock member 27. When dusts collected in the dust chamber 7 are thrown away, the cassette-type dust chamber 7 can be readily taken out of the sweeper body 1 by rotating the top-lid lock member 27 in a direction indicated by the arrow in FIG. 4, and then slightly lifting a rear end of the dust chamber 7 to release the engagement between the front engagement portion 6c of the top lid 6 and the upper opening 1c of the

sweeper body 1. Thus, the collected dusts can be readily thrown away without getting user's hands dirty, simply by opening the top lid 6. It is not essential to pivotally attach the top lid 6 to a region of the dust-chamber sidewall 7c on the side of the rear wheel 3. For example, the top lid 6 may be pivotally attached to a region of the sweeper-body sidewall 1a adjacent to the front edge of the upper opening 1c of the sweeper body 1, and the elastic protrusion 6d at the rear end of the top lid 6 may be locked by the top-lid lock member 27.

The following description will be made about an operation.

In an operation for sweeping a target surface of a rug or an interior pile-woven fabric using the above carpet sweeper, the selector lever 21 is switched to the position illustrated in FIG. 3(a). Thus, the rear wheel 3 supported by the slidable member 20 is moved upward by the biasing force of the springs 19, and therefore the first inclined piles 14 of the swingable brush unit 11 come into contact with the target surface A, such as rug.

In this state, when an manual operation handle 29 is pushed to move the sweeper body 1 forward or in a direction indicated by the solid arrow "a" along the target surface A, the drive wheel 2 is rotated counterclockwise to rotationally drive the driven wheel 4a coaxial with the roller brush 4 clockwise, and therefore the roller brush 4 is rotated clockwise to throw up relatively large dusts on the pile-woven fabric surface, such as rug, by the bristles 5. The dusts are guided by the dust guide plate 28, and collected into the first dust chamber 7a through the opening 25.

In concurrence with the forward movement of the roller brush 4, the plurality of contact members 12 protruding from the outer peripheral surface of the semicylindrical-shaped swingable brush unit 11 pivotally attached to the second dust chamber 7b are moved while sliding on the target surface A, and collides with an edge 10a of the bottom opening 10 of the second dust chamber 7b to stop the swing movement of the swingable brush unit 11. However, the forward movement of the sweeper body 1 is continued, the first inclined piles 14 of the swingable brush unit 11 are tangled with not only the surface of pile-woven fabric, such as rug,

but also inside piles thereof to scrape out thereinto frass and fibrous dusts, such as lint and pet's hairs, which are un-swept by the roller brush 4, as if running a comb therethrough.

Then, when the sweeper body 1 is pulled rearward in a direction indicated by the dotted arrow "a'" by the manual operation handle 29, the contact members 12 of the swingable brush 11 is slidingly moved, and collides with an edge 10b of the opening 10 to stop the swing movement of the swingable brush 11. In the course of this process, when the first inclined piles 14 are slidingly moved on the second inclined piles 17 of the fixed brush 16, the various dusts scrapingly collected in the first inclined piles 14 during the previous forward movement are left in the first inclined piles 14 without being scraped out by the second inclined piles 17 because the first inclined piles 14 are inclined in the same direction as the inclination of the second inclined piles 17. Concurrently, the roller brush 4 is rotated in a direction opposite to that during the previous forward movement to collect relatively large dusts on the target surface A into the first dust chamber 7a from the side of the front wall 7e by use of the bristles 5.

Then, when the sweeper body 1 is re-pushed forward or in the direction indicated by the solid arrow "a", the roller brush 4 is rotated clockwise to collect relatively large dusts on pile-woven fabric, such as rug, into the first dust chamber 7a, as described in connection with the previous forward movement. Concurrently, when the swingable brush unit 11 is rotated counterclockwise by the action of the contact members 12, the dusts, such as fibrous dusts, scrapingly collected and held in the first inclined piles 14 are scraped out by the second inclined piles 17 of the fixed brush 16 inclined in a direction opposite to the swing direction of the swingable brush unit 11, and transferred from the swingable brush unit 11 to the fixed brush 16. Thus, the swingable brush unit 11 cleaned by removing the dusts therefrom is pulled out between the opposite edges of the opening 10 to scrapingly re-collect dusts, such as fibrous dusts, on the target surface, such as rug.

Further, when the sweeper body is re-pulled rearward or in the direction indicated by the dotted arrow "a'", the roller brush 4 is rotated counterclockwise to collect relatively large dusts

on the pile-woven fabric from the side of the front wall 7e into the first dust chamber 7a through the opening 25, as described above. Concurrently, the dusts scrapingly collected in the second inclined piles 17 from the first inclined piles 14 during the previous rearward movement are pushed out from the second inclined piles 17 into the second dust chamber 7b by the first inclined piles 14 as if running a comb therethrough. In the course of this process, dusts scrapingly collected in the first inclined piles 14 of the swingable brush unit 11 are left in the first inclined piles 14 without being scraped out by the second inclined piles 17 because the second inclined piles 17 of the fixed brush 16 are inclined in the same direction as the inclination of the first inclined piles 14 of the swingable brush unit 11, as described above.

By repeating the above forward/rearward movements, relatively large dusts on the surface of pile-woven fabric, such as rug, are thrown up by the roller brush 4 during both the forward/rearward movements. In contrast, fibrous dusts, such as lint and pet's hairs, are scrapingly collected in the first inclined piles 14 of the swingable brush unit 11 during the first forward movement, and these dusts in the first inclined piles 14 are left therein during the first rearward movement because the second inclined piles 17 of the fixed brush 16 are inclined in the same direction as the inclination of the first inclined piles 14. Then, during the second forward movement, the first inclined piles 14 are moved toward the opening 10 while sliding on the second inclined piles 17. Thus, the dusts collected and held in the first inclined piles 14 during the first forward movement are scraped out by the second inclined piles 17, and the cleaned first inclined piles 14 will scrapingly re-collect new dusts. Then, during the second rearward movement, the first inclined piles 14 is slidably moved on the second inclined piles 17 to push the dusts previously transferred in the second inclined piles 17 forward and finally push out them into the second dust chamber 7b while holding newly collected dusts in the first inclined piles 14 in the same manner as that during the previous rearward movement.

As mentioned above in detail, in the operation for sweeping fibrous dusts of rug or the like, dusts scrapingly collected in the first inclined piles 14 of the swingable brush unit 11 are

scrapingly collected in the second in inclined piles 17, and then the dusts in the second in inclined piles 17 are pushed forward and into the second dust chamber 7b by ends of the first inclined piles 14. In this manner, this sweeping operation is completed.

In an operation for sweeping a flat/smooth surface of a target, such as tatami mat or floor, using the carpet sweeper of the present invention, the selector lever 21 is switched to the position in FIG 3(b) to push the rear wheel 3 downward to the position indicated by the line B in FIG 1. Thus, the roller brush 4 located close to the drive wheel 2 is maintained to be in contact with the target surface at the same position as that in the operation for sweeping rug or the like to achieve the above sweeping effect without any difference. Further, the swingable brush unit 11 is moved to a position where it is floated from the target surface. This makes it possible to eliminate the risk of occurrence of damages in floor or tatami mat due to the contact members 12 while allowing dusts on the flat/smooth target surface to be collected into the first dust chamber 7a by the aforementioned action of the roller brush 4.

The above description has been made about the operation in the embodiment where the first inclined piles 14 are attached to the swingable brush unit 11 only on one of the opposite sides of the contact members 12. In another embodiment using a dust chamber 7A where the pair of first and second inclined piles 14, 17 of the swingable brush unit 11 and the fixed brush 16 are provided on both sides of the contact members 12 (see FIG 5), fibrous dusts left without being swept by the bristles 5 of the roller brush 4 can be scraped out alternately and finally collected pushingly into the dust chamber 7A during both forward/rearward movements of the sweeper body 1.

As described above, according to this invention, a cassette-type dust chamber is detachably housed in a sweeper body, and a partition wall is formed in the dust chamber to allow relatively large dusts and fibrous dusts, such as lint or pet's hairs, to be separately collected. This makes it possible to conveniently detach and carry only the cassette-type dust chamber during an operation for throwing away collected dusts, without carrying the sweeper body, and prevent

relatively large dusts thrown up by a roller brush from falling in a gap between an inner wall surface of the sweeper body and an outer peripheral surface of a swingable brush unit so as to maintain a smooth movement of the swingable brush unit over a long period of time.

4. RELATIONSHIP BETWEEN ORIGINAL AND ADDITIONAL APPLICATIONS

In the original Parent Application No. 55-52072 (Publication No. 58-3692), a dust chamber housed in a sweeper body of a carpet sweeper is pivotally attached to a sidewall of the sweeper body, and relatively large dusts thrown up by a roller brush and fibrous dusts scraped out by a swingable brush unit are collected together. In contrast, according to this invention, a dust chamber is designed to be a cassette type detachable relative to a sweeper body, and a partition wall is formed in a dust chamber to allow relatively large dusts and fibrous dusts to be separately collected. This improvement has an advantage of being able to significantly contribute to convenience in an operation for throwing away collected dusts and to maintain a smooth movement of the swingable brush unit so as to achieve longer durable period.

4. BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a vertical sectional view of one embodiment of the present invention.

FIG. 2 is an exploded perspective view of height adjustment means for a rear wheel.

FIG. 3 is a sectional view taken along the line III-III in FIG. 1, wherein FIG. 3(a) shows a state when a target surface is not flat/smooth as in rug, and FIG. 3(b) shows a state when a target surface is flat/smooth as in floor or tatami mat.

FIG. 4 is an exploded perspective view showing a state when dusts in a dust chamber are thrown away.

FIG. 5 is a fragmentary sectional view showing a collection chamber in another embodiment.

1: sweeper body	1a: sidewall of sweeper body	2: drive wheel
3: rear wheel	4: roller brush	6: top lid
7, 7A: dust chamber	7a: first dust chamber	7b: second dust chamber
7a: sidewall of dust chamber	8: partition wall	9: bottom wall
10: opening	11: swingable brush unit	11a: outer peripheral surface
12: contact member	14, 17: inclined piles	16: fixed brush
26: height adjustment means (18: housing, 19: spring, 20: slidable member, 21: selector lever,		
23: cover plate)	27: top-lid lock member	